



Optica P218Z HD Outdoor 18x PTZ Speed Dome Network Camera

Installation Guide

Ver. 1.4

Preface

The information given in this manual was current when published. The company reserves the right to revise and improve its products. All specifications are subject to change without notice.

Notice

This manual provides the installation information for the P218Z PTZ Speed Dome. To work with the P218Z Camera, any installer or technician must have the following minimum qualifications:

- A basic knowledge of CCTV systems and components
- A basic knowledge of electrical wiring and low-voltage electrical hookups
- A basic knowledge of network system setting
- Have read this manual completely

Copyright

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Important Information

Before proceeding, please read and observe all instructions and warnings in this manual. Retain this manual with the original bill of sale for future reference and, if necessary, warranty service. When unpacking the unit, check for missing or damaged items. If any item is missing, or if damage is evident, DO NOT INSTALL OR OPERATE THIS PRODUCT. Contact the dealer for assistance.

Regulation

	<p>This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:</p> <p>(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.</p>
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	<p>This symbol on the product or on its packaging indicates that this product shall not be treated as household waste in accordance with Directive 2002 / 96 / EC. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By proper waste handling of this product, please ensure that it has no negative consequences for the environment and human health, which could otherwise be caused if this product is thrown into the garbage bin. The recycling of materials will help to conserve natural resources.</p> <p>For more details information about recycling of this product, please contact the local city office, household waste disposal service or the shop where purchased the product.</p>
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	<p>Compliance is evidenced by written declaration from our suppliers, assuring that any potential trace contamination levels of restricted substances are below the maximum level set by EU Directive 2002 / 95 / EC, or are exempted due to their application.</p>
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Warnings and Cautions

- **Handle the camera carefully**

Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling or storage.

- **Installing electricity wiring carefully**

Ask qualified personnel of electrical wiring for the installation. Please note that input electricity to the unit is at tolerance of AC 24V ± 10%.

The camera is capable of surge protection; ensure AC power model unit grounded appropriately against damage of heavy current or electric shock.

- **Do not disassemble the camera**

To prevent electric shock, do not remove screws or covers. There are no user serviceable parts inside. Ask a qualified service person for servicing.

- **Do not block cooling holes on the bracket**

This camera has a cooling fan inside. Blocking the cooling holes leads to build up of heat the camera and may cause malfunction.

- **Do not operate the camera beyond the specified temperature, humidity or power source ratings**

When the heater is not powered, use the camera under conditions where temperature is between 0°C ~ 40°C (32°F ~ 104°F). When the heater is powered, use the camera under conditions where temperature is between -40°C ~ 50°C (-40°F ~ 122°F).

- **Do not use strong or abrasive detergents when cleaning the camera body**

Use a dry cloth to clean the camera when it is dirty. In case the dirt is hard to remove, use a mild detergent and wipe the camera gently.

- **Never face the camera towards the sun**

Do not aim the camera at bright objects. Whether the camera is in use or not, never aim it at the sun or other extremely bright objects. Otherwise, the camera may be smeared or damaged.

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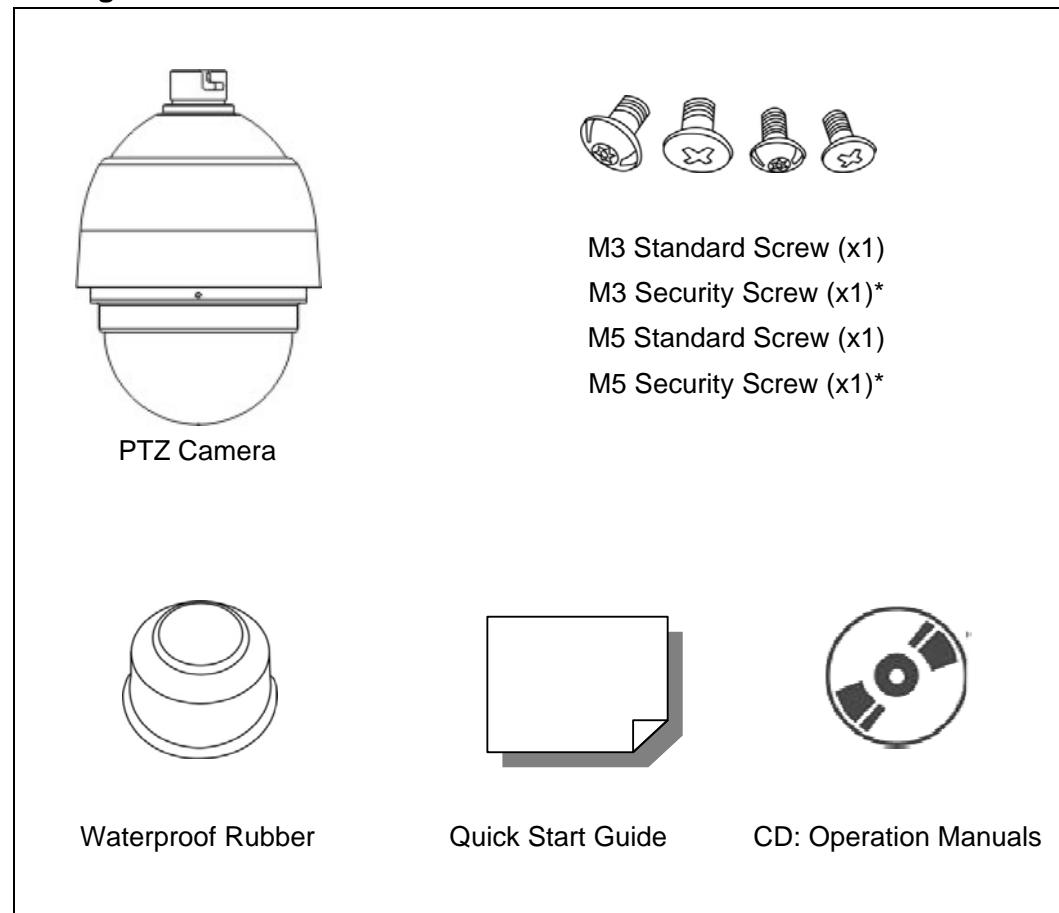
1. Introduction

The P218Z Speed Dome IP Camera is designed to deliver superb performance and durability with an intelligent and stylish housing that is suitable in any security and surveillance installation.

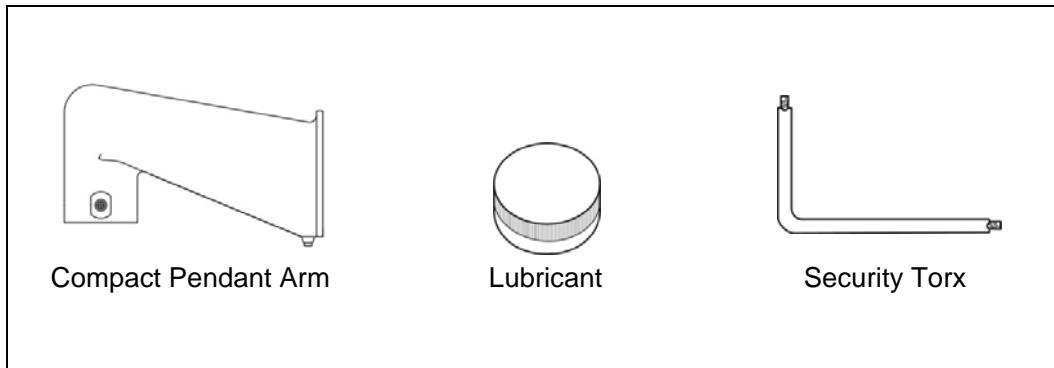
2. Standard Package Contents

Before proceeding, please check the box contains the items listed here. If any item is missing or has defects, DO NOT install or operate the product and contact dealer for assistance.

Package Contents



Installation Guide



3. Camera Cable Connections

Before installing or connecting the P218Z Camera, please refer to this section and complete preparations for dome setups and various switch settings.

There will be a PE cloth sheet covered inside the dome cover and a lens cap on the lens for shipping protection. Follow the steps below to remove those protective materials.

Step 1: Unpack the dome package and take out the dome body.

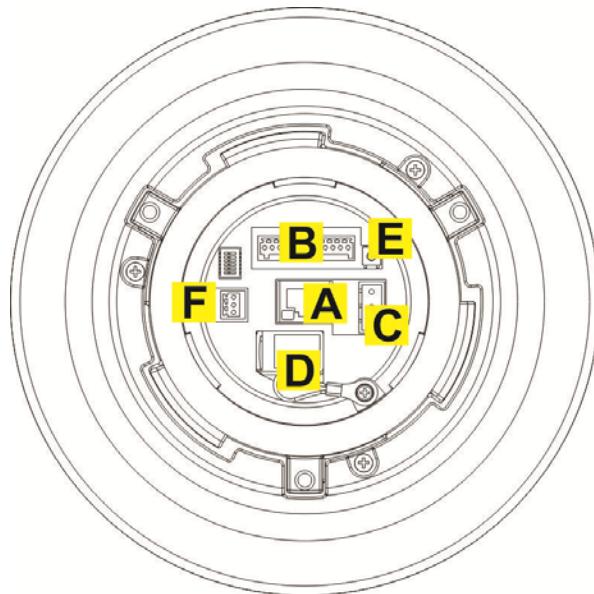
Step 2: Rotate and remove the protective cover.

Step 3: Remove the PE cloth sheet and take off the lens cap.

Step 4: Attach the dome cover to the dome body.

3.1 Switch / Connector Definition

There are various connectors located on the PTZ Camera's back plate as shown in the figures below. Please refer to the diagrams and tables accompanied with for use of each switch / connector.



A	RJ-45 Connector
B	ALARM I/O
C	Power
D	Micro SD Card Slot
E	Factory Reset Button
F	Audio I/O



NOTE: DO NOT change the network Speed Dome Camera's Communication Switch factory default settings.

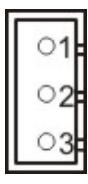
3.2 Cable Requirements

For operation, the P218Z Camera requires power cable and RJ-45 as described below:

3.2.1 Power Connection

Please refer to the illustrations below to connect power core through the supplied power adaptor. The camera can be powered by Power Over Ethernet Plus / PoE+ (802.3.at) or AC 24V. However, AC 24V power is required to power the Camera heater.

AC 24V Pin Connections



Pin	Definition
1	AC 24-
2	FG
3	AC 24+

3.2.2 Ethernet Cable Connection

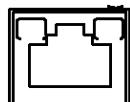
Use of Category 5 Ethernet cable is recommended for network connection; to have best transmission quality, cable length shall not exceed 100 meters.

Connect one end of the Ethernet cable to the RJ-45 connector of the network Speed Dome Camera, and the other end of the cable to the network switch or PC.



NOTE: In some cases, users may need an Ethernet crossover cable when connecting the P218Z Camera directly to the PC.

Check the status of the link indicator and activity indicator LEDs; if the LEDs are unlit, please check LAN connection.



Green Link Light indicates good network connection.

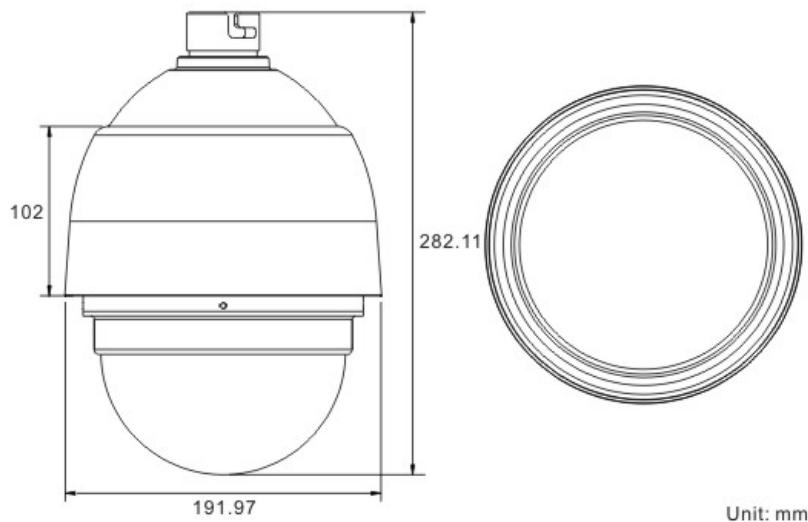
Orange Activity Light flashes for network activity indication.

4. Camera Installation

The PTZ Camera can be installed on ceiling, on wall or on pole. In the following sections, various PTZ Camera installation accessories, installation methods and installation procedures will be described in detail. The next section will provide the PTZ Camera's dimensions for reference before installation.

4.1 Camera Dimensions

The PTZ Camera's dimensions are as below show detailed dimensions for the PTZ Camera's different parts.

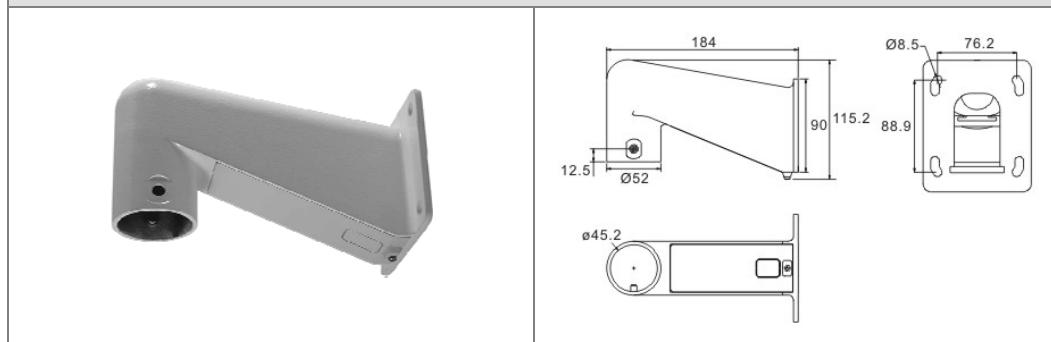


4.2 Included Accessories

MNT-PEN-MIN Compact Pendent Mount

184x104x115.2 mm (7.24x4.09x4.54 inches); 0.6kg (1.2 lbs).

Supplied with rubber washer-8 x1, pendent tube washer x1, spring washer-8 x1 and M8x12 screw x1.



4.3 Optional Accessories

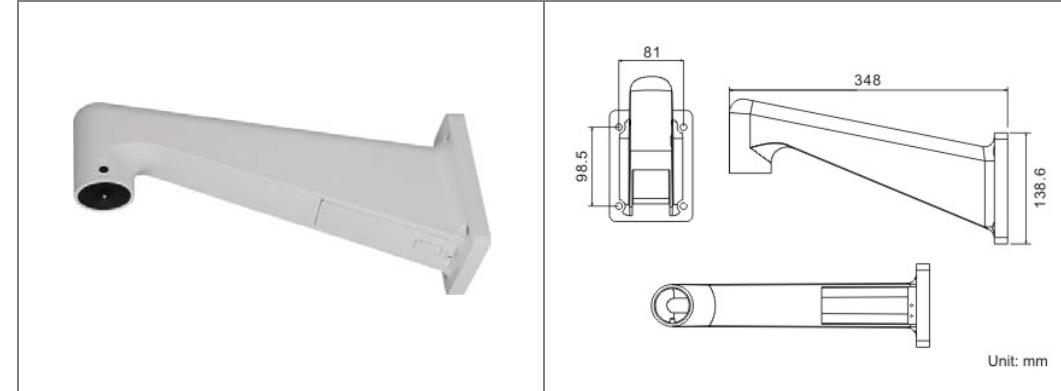
Mounting Accessories

MNT-PEN-STD Standard Pendent Mount

White; 348×104×138.6 mm (13.7×4.1×5.5 inches); 1.5 kg (3.3 lbs);

Diameter: 45 mm (1.8 inches).

Supplied with M8x12 screw x1, spring washer-8 x1, pendent tube washer x1, rubber washer-8 x1 and sponge x2.

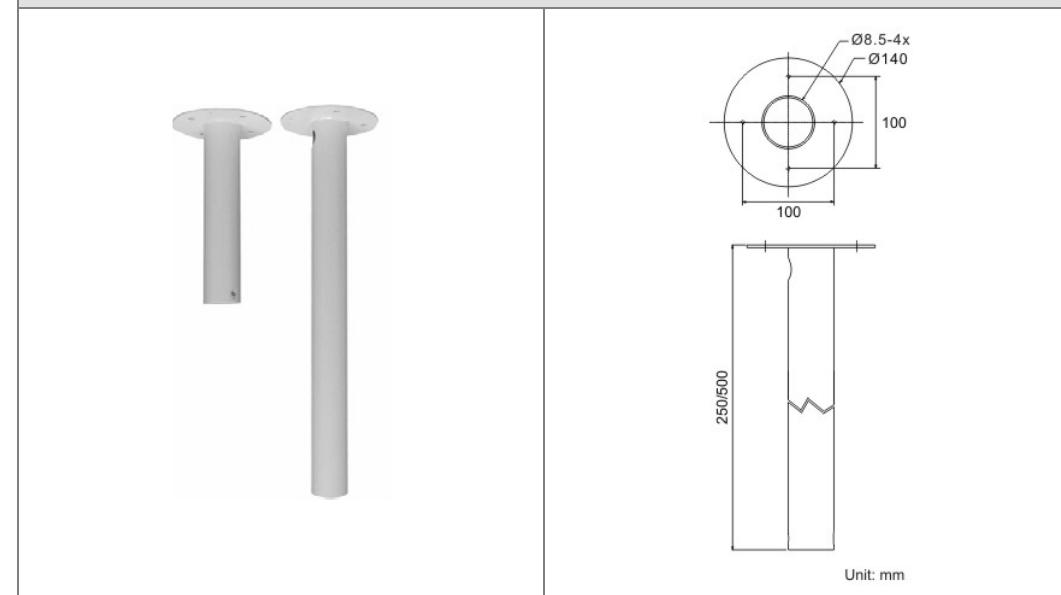


MNT-PEN-T25 Straight Tube – 25CM (50CM model also available)

Iron; Height: 250 mm (9.8 inches);

Diameter: 50 mm (2 inches) 1 kg (2.2 lbs).

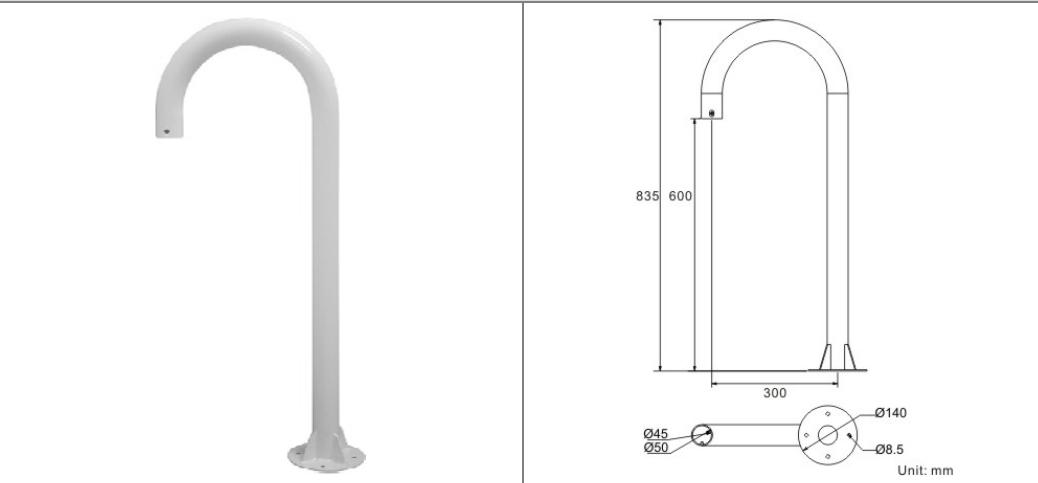
Supplied with M8x12 screw x1, spring washer-8 x1, pendent tube washer x1, rubber washer-8 x1 and waterproof rubber x1.



MNT-PEN-SWAN Swan Tube

White; Iron, Dimension: 835 x 300 mm (32.9x11.8 inches); Diameter: 45 mm (1.8 inches); Weight: 3.8 kg (8.4 lbs).

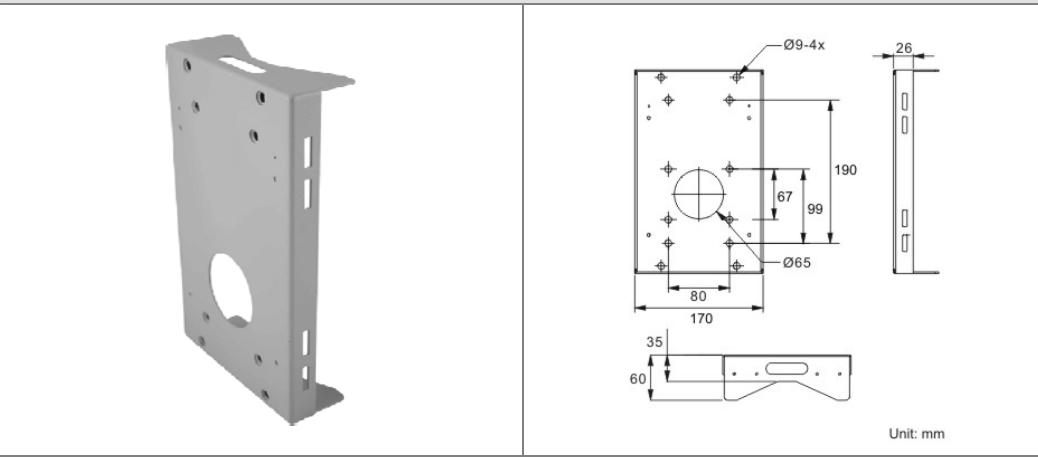
Supplied with pendent tube washer x1, rubber washer-8 x1, waterproof rubber x1, spring washer-8 x1 and M8x12 screw x1.

**MNT-POLE-WIDE Pole Wide Direct Mount**

270(L) x 170(W) x 60(D) mm (10.6 x 6.7 x 2.4 inches);

Diameter: 112~140 mm (4.4~5.5 inches); Weight: 1 kg (2.2 lbs).

Supplied with M8x16 screw x4, washer x4, stainless steel straps x4 and spring washer-8 x4.



4.4 Wall Mount

The camera can be mounted on the wall with Compact Pendent Mount and Standard Pendent Mount, or from the top of a wall or roof with the Swan Mount.

4.4.1 Compact Pendent Mount

Package Contents:

- Rubber Washer-8 x1
- Pendent Tube Washer x1
- Spring Washer-8 x1
- M8x12 Screw x1

Items Needed:

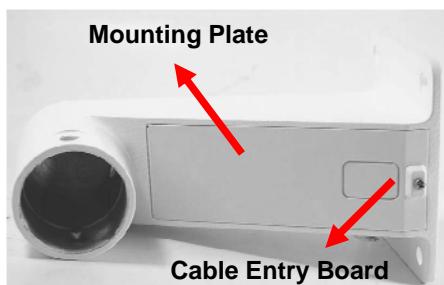
- P218Z Camera
- Power Cable
- Ethernet Cable
- Compact Pendent Mount and equipped items
- Waterproof Rubber
- Screws and Screw Anchors for fixing the Compact Pendent Mount

Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps below to mount the PTZ Camera with the Compact Pendent Mount.

- 1) Make a cable entry hole on the wall to recess the cables. Otherwise, users could push up the Cable Entry Board on the Compact Pendent Mount's Mounting Plate to place the cables, as shown in the photo below.



- 2) Fix the Compact Pendent Mount on the wall with proper screws and screw anchors.
- 3) Attach the Waterproof Rubber to the Compact Pendent Mount.
- 4) Run the cable(s) through the Compact Pendent Mount.

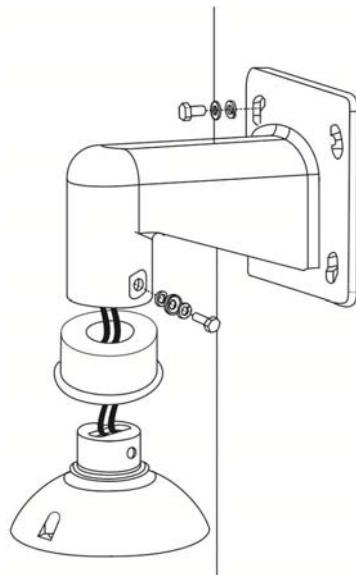


NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. The sponge can be placed in two ways as shown in the illustrations below.



- 5) Thread the cable(s) through the Mounting Kit and join the Mounting Kit to the Compact Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.
- 6) Connect the cable(s) to the PTZ Camera.
- 7) Join the PTZ Camera to the PTZ Camera with the supplied screw and washers.

Wall Mounting: Compact Pendent Mount



4.4.2 Standard Pendent Mount

Package Contents:

- M8x12 Screw x1
- Spring Washer-8 x1
- Pendent Tube Washer x1
- Rubber Washer-8 x1
- Sponge x2

Items Needed:

- PTZ Camera
- Power Cable
- Ethernet Cable
- Standard Pendent Mount and equipped items (optional accessory)
- Waterproof Rubber
- Screws and Screw Anchors for fixing the Standard Pendent Mount onto the ceiling

Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps below to mount the PTZ Camera with the Standard Pendent Mount.

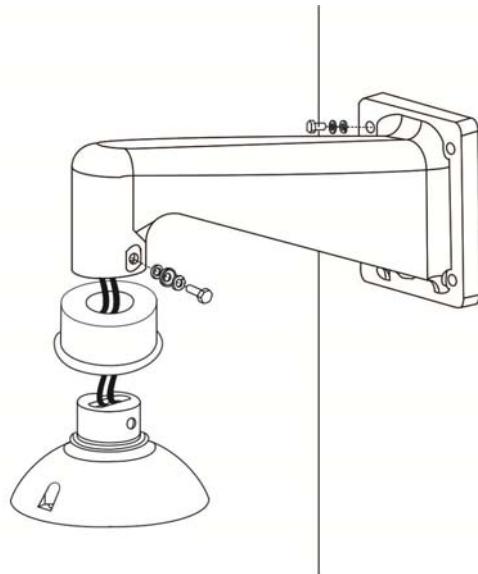
- 1) Make a cable entry hole on the wall to recess the cables. Otherwise, users could push up the cable entry board on the Standard Pendent Mount's mounting plate to place the cables (refer to the illustration in section [4.4.2 Compact Pendent Mount > Step 1](#)).
- 2) Fix the Standard Pendent Mount on the wall with proper screws and screw anchors.
- 3) Attach the Waterproof Rubber to the Standard Pendent Mount.
- 4) Run the cable(s) through the Standard Pendent Mount.



NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. Refer to the illustrations in section [4.4.2 Compact Pendent Mount > Step 4](#).

- 5) Thread the cable(s) through the Mounting Kit and join the Mounting Kit to the Standard Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.
- 6) Connect the cable(s) to the PTZ Camera.
- 7) Join the PTZ Camera to the Mounting Kit with the supplied screw and washers.

Wall Mounting: Standard Pendent Mount



4.4.3 Swan Tube

Package Contents:

- M8x12 Screw x1
- Spring Washer-8 x1
- Pendent Tube Washer x1
- Rubber Washer-8 x1
- Waterproof Rubber x1

Items Needed:

- PTZ Camera
- Power Cable
- Ethernet Cable
- Swan Tube
- Waterproof Rubber
- Screws and Screw Anchors for fixing the Swan Tube on the floor

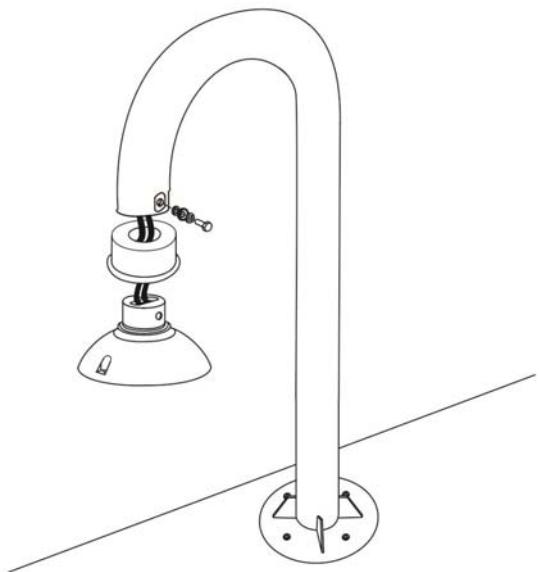
Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps to mount the Dome with the Swan Tube.

- 1) Fix the Swan Tube on the floor with proper screws and screw anchors.
- 2) Thread the cables through the Swan Tube and the Mounting Kit.
- 3) Fix the Mounting Kit to the Swan Tube with the supplied screws and washers. Then adjust the waterproof rubber to the junction of Swan Tube and Mounting Kit.
- 4) Connect the cables to the PTZ Camera. Then attach the Dome to the Mounting Kit and fix them with the supplied screw.

Wall Mount: Swan Tube + Mounting Kit



4.5 Ceiling Mount

Generally, there are three kinds of PTZ Camera ceiling mounting methods: hard-ceiling, in-ceiling and mounting with Straight Tube. Refer to the following sections for more details.

The following figures show how cables connect to the PTZ Camera in different ways.

4.5.1 Ceiling Mounting with Straight Tube

The Straight Tube is available in different length: 25 cm and 50 cm.

Package Contents:

- M8x12 Screw x1
- Spring Washer-8 x1
- Pendent Tube Washer x1
- Rubber Washer-8 x1
- Waterproof Rubber x1

Items Needed:

- PTZ Camera
- Power Cable
- Ethernet Cable
- Straight Tube
- Screws and Screw Anchors for fixing the Straight Tube onto the ceiling

Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps to mount the PTZ Camera with the Straight Tube.

- 5) Ensure that the ceiling can support the weight of the PTZ Camera and Straight Tube.
- 6) Make a cable entry hole on the ceiling.
- 7) Fix the suspension bracket to the ceiling with proper screws and screw anchors.
- 8) Thread the cables through the Straight Tube and the Mounting kit.

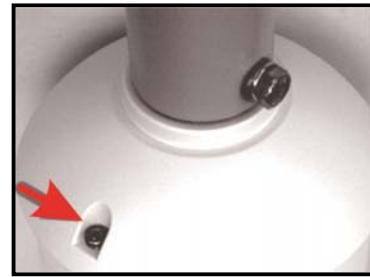


NOTE : After threading the cables, please block the cable entry hole with the supplied sponge(s) to avoid insects entering the tube.

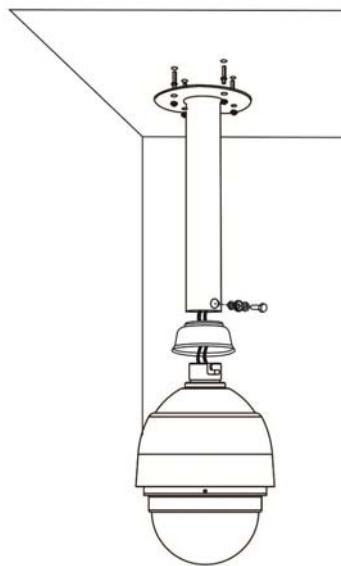
9) Fix the Mounting Kit to the Straight Tube with the supplied screws and washers.

10) Connect the cables to the PTZ Camera.

7) Mount the PTZ Camera to the Mounting Kit. (Ensure the PTZ Camera is fixed completely, and the thread holes on the Lock Screw Plate and Mounting Kit are aligned). Afterwards, screw the supplied M5 standard screw / security screw, as shown in the picture.



Ceiling Mounting: Straight Tube



4.6 Pole Mount

4.6.1 Pole Wide Direct Mount

Package Contents:

- Stainless Steel Straps x4
- M8x16 Screw x4
- Washer x4
- Spring Washer-8 x4

Items Needed:

- PTZ Camera
- Power Cable
- Ethernet Cable
- Standard / Compact Pendent Mount and equipped items (optional accessory)
- Pole Wide Direct Mount
- Waterproof Rubber
- Stainless Steel Straps for fixing the Pole Thin / Wide Direct Mounting

Tools Needed:

- Stainless Strap Cutter
- Tool for screwing

Follow the steps below to mount the PTZ Camera with the Pole Thin / Wide Direct Mounting and Standard / Compact Pendent Mount.

- 1) Fasten the Pole Thin / Wide Direct Mounting on a pole with equipped stainless straps.
- 2) Run the cable(s) through the hole on the Pole Thin / Wide Direct Mounting.
- 3) Fasten the Standard / Compact Pendent Mount onto the Pole Thin/Wide Direct Mounting with the supplied screws and washers. Then thread the cable(s) through the Standard / Compact Pendent Mount with the cable(s) coming out of the Pendent Mount's outlet.



NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. Refer to the illustrations in section [4.4.2 Compact Pendent Mount > Step 4](#).

- 4) Attach the Waterproof Rubber to the Standard / Compact Pendent Mount.
- 5) Thread the cable(s) through the Mounting Kit and join the Mounting Kit to the Standard / Compact Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.
- 6) Connect the cable(s) to the PTZ Camera.
- 7) Join the PTZ Camera to the Mounting Kit with the supplied screw and washers.

Pole Direct Mounting:

Pole Wide Direct Mount + Standard / Compact Pendent Mount

